



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

treating of the resistance to Pyrrhus, after mentioning the fire and eloquence of Appius Claudius, he adds: "but probably the appearance in the harbor of Ostia of a Carthaginian fleet offering aid had more effect than even the speech of Appius." Is not this a case where pragmatism has made our author untrue to the Roman spirit? Surely the city that warred so unfaintingly against Hannibal after Cannae and Lake Trasimene did not depend on an alien fleet for stimulus to action against the brilliant Epirot adventurer. Later, when we come to the Roman conquest of Britain we miss an adequate treatment. Perhaps, under the old conception of the Roman evacuation of Britain such brevity of discussion might have been justified; but since the work of Professor Bury the advocates of "the clean sweep" theory of the abandonment have been pretty badly harried, and we do not fancy that Professor Abbott belongs to the number. And, not belonging to them, he should have vouchsafed the topic a little more space. The same desire for brevity doubtless explains, but in our humble opinion does not justify, the paragraph, in the introductory chapter, on "The Significance of Roman History." Here also the teacher may be relied upon; but the student might well have before his eyes a less inadequate account of the impossibility of understanding European development or modern civilization without a knowledge of Roman history. As to details a wise editor precludes serious discussion. With reference to most of them we should have to utter only praise; but here and there our author has sacrificed clarity to conciseness. For instance, he speaks of the arch in such a way as to leave the student in danger of inferring that it was primarily a Greek product. It is perfectly true that the Romans borrowed the arch, but it would be better to say they adopted it; and it became their child by virtue of their treatment. Historically it is a Roman influence, not a Greek one. As to the *Handbook* we may merely note that our author might have given us a little more of his reliable judgment about the works enumerated under "Sources."

Professor Abbott writes as he reasons, clearly and conclusively. There is no attempt to write "attractively" save as clearness and directness, with occasional vividness, are always attractive. If we frankly plead guilty to being hypercritical, we may admit that one or two sentences seemed to jar a little. These, however, are negligible minutiae.

In conclusion may we say that for the period on which we presume to judge, that is down to 476 A. D., we believe the *Short History* to be the best manual for secondary schools at present available? As to the sequent parts we could speak only as a general reader; but the probabilities are that the high level of execution is maintained to the end.

UNIVERSITY OF COLORADO

F. B. R. HELLEMS

First-Year Mathematics for Secondary Schools. By GEORGE WILLIAM MYERS and colleagues of the University High School, College of Education of the University of Chicago. Chicago: The University of Chicago Press, 1907. Pp. xv+181. \$1.00 net; postpaid \$1.09.

This book embodies the results of an experiment on organizing the mathematical subject-matter of the secondary school into a coherent course of study, articulating more thoroughly with the pupil's experience than the present system. In their preface the authors state these weaknesses very clearly, and frankly put

forward this book as an attempt to overcome the weaknesses pointed out. The book is declared to be regarded "merely as a *stage of study* of the problem of unifying mathematics in the secondary school." Under these circumstances the reviewer is permitted not only to enumerate the subjects treated and to comment upon good points but to question rather sharply whether the purpose of the authors has been accomplished and whether the results to the pupil are better or worse than under the old stereotyped form of algebra and geometry.

The first eighty pages are written in a spirit and form entirely new to algebras. The treatment is inductive and, as such treatment always requires, progress is necessarily slow unless the pages of the book are very rapidly covered. The first thirty-four pages are so simple as to be very easy reading. To explain negative numbers the "algebraic balance" is introduced. It may be questioned whether such a device saves time or adds to clearness.

Chap. vii is on "Uses of Inequalities," apparently introduced to allow application to certain theorems on geometry. Hall and Knight first introduce this subject on p. 279 of their *Algebra for Colleges and Schools*. Is it so simple that it can be abruptly interpolated before the ninth-grade pupil has studied factoring or fractions? Other difficult subjects introduced in the first eighty pages are: (1) the use of Greek pi, p. 40; this abstraction continues to give difficulty to eleventh-grade students; (2) the use of radical signs introduced *without explanation* in connection with the pendulum formula, p. 42; (3) drawing to scale, pp. 44 ff.; (4) the problem of finding the distance between two inaccessible points, p. 47; this is the most difficult problem of plane trigonometry; (5) the equation of moments (not so called by name), pp. 56-79—one of three or four most difficult experiments in physics.

In chap. xii, "the Simple Equation," are found for the first time clear, succinct statements of the fundamental axioms. They have been *inductively* derived in the course of seventy-seven pages of text. Definitions up to this point have been few. Some are worded very carelessly, as: "A number having a positive or plus (+) sign before it is called a *positive* number" (p. 5). The question is immediately asked, "What is a *negative* number?" Will this encourage logical or accurate thinking?

Pp. 88-167 contain a treatment of equations containing fractions; factoring; addition and subtraction; ratio, proportion, and similarity; linear equations containing two unknown numbers; quadratic equations. The final chapter is on logarithms. These pages lack sufficient problems for practice and cannot be commended for logical coherency.

The query arises, what will the pupil *know* of mathematics after having spent one year on such a course as this? The authors say the experiment has been sufficiently satisfactory to justify its continuation. Results must speak for themselves. If such methods produce more satisfactory results than the old, they must be adopted. No such carefully worked-out plan has heretofore been presented. It therefore deserves the thoughtful consideration of every teacher.

In many particulars this book deserves great commendation. The idea of unifying the mathematical course is admirable. The discussion of similar triangles is excellent. Introduction of graphical methods of solution is to be encouraged.

FRANKLIN T. JONES

UNIVERSITY SCHOOL
Cleveland, Ohio